

ABSTRACT OF THE DISCLOSURE

A power MOSFET comprising a drain layer of a first conductivity type, a drift layer of the first conductivity type provided on the drain layer, a base layer of a first or a second conductivity type provided on the drift layer, a source region of the first conductivity type provided on the base layer, a gate insulating film formed on an inner wall surface of a trench penetrating the base layer and reaching at the drift layer, and a gate electrode provided on the gate insulating film inside the trench, wherein the gate insulating film is formed such that a portion thereof adjacent to the drift layer is thicker than a portion thereof adjacent to the base layer, and the drift layer has an impurity concentration gradient higher in the vicinity of the drain layer and lower in the vicinity of the source region along a depth direction of trench.